UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/982,668	10/18/2001	Kenji Yoshino	450100-03546	7650

20999 7590 06/21/2004	EXAMINER	
FROMMER LAWRENCE & HAUG	ELMORE, REBA I	
745 FIFTH AVENUE- 10TH FL.		
NEW YORK, NY 10151	ART UNIT	PAPER NUMBER
	2187	

DATE MAILED: 06/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>22 March 2004</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-22</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-22</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1-22 are presented for examination.

Specification

2.   The objection to the title is *withdrawn* due to the amendment.

3.   The objection for Figure 28b being shown on page 18, line 25 as '28B' is *withdrawn* due

to the amendment.

4.   The objection for acronyms being defined in their first usage within the body of the

specification is *withdrawn* due to the amendment.

5.   The specification has not been checked to the extent necessary to determine the presence

of all possible minor errors. Applicant's cooperation is requested in correcting any errors of

which applicant may become aware in the specification.

35 USC § 102

6.   The rejection of claims 1-41 as being anticipated by Kihara is *maintained* and repeated

below but updated to include the amendments to the claims.

7.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

8.   Claims 1-41 are rejected under 35 U.S.C. 102(e) as being anticipated by Kihara et al.

9.　　　Kihara teaches the invention (claims 1, 10, 13 and 22) as claimed including a data

processing device comprising:

a data storage means for storing an access permission table stored in media is taught as

stored information necessary for the authentication of memory card and/or the recorder/player,

this stored information consists of data required for determining usage of the memory card and

data contents (e.g., see Figure 3 and col. 7, line 55 to col. 9, line 61) additionally there is an area

referred to as the management flag area which also contains flags detailing how the memory can

be used as well as an access permission flag for indicating whether an area is free or read

protected, also, access permission tables can include information as to how an area can be

utilized as to what type of data can be stored or erased from the memory (e.g., see Figures 5-7

and col. 10, line 9 to col. 14, line 32) ;

a memory interface unit for accessing data storage means as an interface between the

DSP and the memory card (e.g., see Figure 3 and col. 7, line 55 to col. 8, line 10);

a control unit for controlling the memory interface unit is taught as the digital signal

processor (DSP) which provides the control signals necessary for operating the memory card

(e.g., see Figure 3 and col. 7, line 55 to col. 8, line 10);

an access permission table which is stored in a data storage area in the data storage means

is set in the memory interface unit is taught as the security block which contains a plurality of

authentication keys (e.g., see Figure 3 and col. 8, line 56 to col. 9, line 14); and,

in response to an access command to access the data storage means, which is issued by

the control unit, the memory interface unit determines, by referring to the access permission

table, whether or not to execute the access command, whereby processing which is set

executable by the access permission table is only executed is taught as multiple levels of security including the mutual authentication of security IC and the security block with the added level of an erase protection switch specifically for the flash memory (e.g., see Figure 3 and col. 8, line 56 to col. 9, line 61).

As to claims 2, 10, 11 and 14, Kihara teaches:

the data storage area in the data storage means is a flash memory having a plurality of blocks which each block consisting of a plurality of sectors which each have a predetermined data capacity (e.g., see col. 10, lines 9-27);

in the access permission table, permission information on block-unit data processing is set as the access permission flag which are part of every page (e.g., see col. 10, lines 27-57); and,

in accordance with the set permission information, the memory interface unit includes means for determining whether or not the block-unit data processing can be executed as the use of prohibition flags as well as the permission flags (e.g., see col. 10, lines 27-57).

As to claims 3 and 15, Kihara teaches:

only when a type of processing corresponding to the access command from the control unit is within a range of processing types which are set executable by the access permission table does the memory interface unit execute the type of processing, and sets a process-success flag in accordance with a success of the processing in the memory interface unit as the different layers or hierarchy of the processes of the file system with each layer having criteria which must be met prior to the processing being allowed (e.g., see col. 9, line 62 to col. 10, line 8); and,

the control unit executes processing thereof on condition that the setting of the process-success flag in the memory interface unit is verified as the DSP performing the processing which the criteria has been verified (e.g., see (e.g., see col. 9, line 62 to col. 10, line 8).

As to claims 4 and 16, Kihara teaches:

when the access command designates a data-file reading process, the control unit executes a process in which the address of a data file to be read is selected from a file allocation table corresponding to the data storage area in the data storage means and is transmitted to the memory interface unit (e.g., see col. 11, line 60 to col. 14, line 17); and,

after receiving the address of the data file, the memory interface unit determines, by using the received address to refer to the access permission table, whether or not an address-assigned area having the address is a data-readable area, and only when the address assigned area is a data-readable area does the memory interface unit execute the data-file reading process is taught as the DSP determining the type of file being accessed along with the type of processing being determined and authenticated (e.g., see col. 11, line 60 to col. 14, line 17).

As to claims 5 and 17, Kihara teaches:

when the access command designates a data-file writing process, the control unit executes a process in which the address of the data file to be written is selected from the data storage area in the data storage means and is transmitted as a write address to the memory interface unit as writing content to the memory card (e.g., see col. 9, lines 1-25); and,

after receiving the write address, the memory interface unit determines whether or not an address-assigned area having the write address is a data writable area by using the received write address to refer to the access permission table as determining whether or not conditions for the

mutual authentication have been met as well as the erase protection switch being correctly set for

the writing of data to the memory card (e.g., see col. 9, lines 1-61) and only when the address-

assigned area is a data writable area allowing the execute of the data file writing process to be

executed (e.g., see col. 9, line 1 to claim 10, line 67).

As to claims 6, 12 and 18, Kihara teaches:

in the access permission table, in the form of additional data, an integrity check value

which is generated based on data in the access permission table is included as a check value for

verifying whether or not the data in the access permission table is interpolated as the use of an

ECC area (e.g., see col. 10, lines 27-43);

the memory interface unit including a cryptosystem unit for executing the integrity

checking the access permission table using the integrity check value as part of the DES, data

encryption standard, encrypting circuit (e.g., see col. 5, lines 31-41); and,

when the cryptosystem unit determines that the access permission table has not been

interpolated, the access permission table is set in the memory interface unit and the data

processing is executed based on the determination of access permission in accordance with the

set access permission table as both the memory card and the DSP having the encrypting circuitry

(e.g., see col. 6, lines 11-59).

As to claims 7 and 19, Kihara teaches:

in the access permission table, in the form of additional data, an integrity check value

which is generated based on data including data in the access permission table and a identifier

unique to the data storage means is included as a check value for verifying whether or not the

data in the access permission table is interpolated (e.g., see Figure 5 and col. 10, lines 9-43);

the verification based on the integrity check value by the memory interface unit is

executed as the verification of whether or not the access permission table is stored in valid

media, in addition to the verification of whether or not the data in the access permission table is

interpolated as the attribute information which is also stored on the memory card (e.g., see col. 9,

lines 39-61); and,

when verifying the validity of storage, the access permission table is set in the memory

interface unit and data processing is executed based on the determination of access permission in

accordance with the set access permission table (e.g., see col. 9, line 15 to col. 10, line 67).

As to claims 8 and 20, Kihara teaches when mutual authentication is established as a

result of mutual authentication with the data storage means, the access permission table which is

stored in the memory of the data storage means, is set in the memory interface unit as additional

data used for access capability (e.g., see col. 21, line 1 to col. 22 line 67).

As to claims 9 and 21, Kihara teaches:

the data storage means is a flash memory having a data storage area which has a plurality

of blocks, each block consisting of a plurality of sectors with each sector having a predetermined

capacity (e.g., see col. 10, lines 9- 43);

in the access permission table, either information on whether or not block unit data

erasure can be performed or information on whether or not block unit data playback can be

performed is set as using an erase protection switch and restricting the number of rewrites times

to the flash memory (e.g., see col. 9, line 51 to col. 11, line 57); and,

in accordance with either information set in the access permission table, the memory

interface unit determines whether or not block unit data processing can be executed (e.g., see col.

9, line 51 to col. 11, line 57).

Response to Applicant's Remarks

10.   Applicant's arguments filed March 22, 2004 have been fully considered but they are not

persuasive.

11.   As to the remarks directed to the teaching of the access permission table, this element is

taught to the extent necessary for the actual claim language. The claim language does not detail

the content of the access permission table and this terminology can have many different

meanings. For instance, access permission can consist of permission to read or write to an area

or it can encompass the connectivity allowed by the interfaces. Information is stored which

determines these types of things and this information can be validly referred to as 'access

permission table' data.

Action is made Final

12.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

Conclusion

13.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

14.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Reba I. Elmore, whose telephone number is (703) 305-9706. The

examiner can normally be reached on M-TH from 7:30am to 6:00pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the art unit supervisor

for AU 2187, Donald Sparks, can be reached for general questions concerning this application at

(703) 308-1756.   Additionally, the official fax phone number for the art unit is (703) 746-7239.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the Tech Center receptionist whose telephone number is (703) 305-

3800/4700.

Reba I. Elmore
Primary Patent Examiner
Art Unit 2187

June 16, 2004